

Rediscovering the Connection to the Quinnipiac

Creating an Identity for the Front Street Neighborhood
New Haven, CT

LAUREN DuCHARME 2008

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ABSTRACT

The Quinnipiac River is a tidal river that leads to the New Haven Harbor and ultimately the Long Island Sound in New Haven, Connecticut. The water is essential to the livelihood of many in New Haven. Besides those who utilize the river to make their living, however, few in New Haven have strong available access to the waterfront. All along major bodies of water in the United States, cities are beginning to reclaim their waterfronts as an asset for their communities.

Rediscovering the Connection to the Quinnipiac looked at how several parks along the Quinnipiac River could connect to create a positive social space and unity in the community, while also having a beneficial impact on the ecology of the Quinnipiac River. It also looked at how this connection could be used to create an identity for the Front Street neighborhood. This study consisted of three phases. The first introduced and examined elements of urban park design, ecological bank stabilization and greenways as connections through a literature review. It also explored precedent studies for urban waterfront revitalization through park redesign and then how those examples could be built upon to increase the success and sustainability of the redesign. The second phase included a design charrette with twenty-six local community members that helped establish a list of desired elements for the parks and streetscape. These suggestions formed the skeleton for the final program. The third phase utilized the information gathered and synthesized to create a master plan for the two major parks of the Front Street neighborhood and the connection between them. Further design detail was provided with a site plan of the Quinnipiac River Park and support graphics.

Rediscovering the Connection to the Quinnipiac provides a design solution to help give the Front Street neighborhood a cohesive identity and greater access to the river at their back door. A redesign of these spaces could revitalize the neighborhood and remind New Haven of the early glory of this majestic estuary.



A WORD OF THANKS...

One page hardly seems adequate to say thank you to all those that made this project possible. First, I would have to thank Ron Spangler, who has given Ball State 27 amazing years, and I'm glad he waited until our class finished to retire! All the professors that I've had while at CAP deserve a big thank you... you (Dan, Darren, Cindy, Chris, German, John, Rob, Meg and Martha) all kept me going and ready for next challenge. Joe Blalock, as my thesis advisor, deserves a special thank you for his guidance and for putting up with my questions and stubbornness. Lastly, thank you, Malcolm, for giving me the direction to enter into the landscape architecture program and for also waiting until my class was finished to step down as chair!

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Dedicated in loving memory of M. Kathleen DuCharme (5.11.1947 - 3.28.2008)

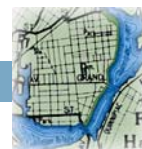
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REDISCOVERING THE CONNECTION TO THE QUINNIPIAC



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INTRODUCTION

INTRODUCTION

The Quinnipiac River runs for approximately 38 miles, beginning its long journey in Farmington, Connecticut. New Haven is the last city the river flows through before entering the New Haven Harbor and then the Long Island Sound. The Quinnipiac River is unique in the New Haven area, different from other areas of its watershed because it is in New Haven that approximately 6 miles of the river is not only tidal, but also an estuary.

The Quinnipiac River has a long history in New Haven, being one of the primary reasons that settling occurred there. The community that formed around the river was an oystering one from the beginning. Today, the river is still used for oystering, but it is no longer the city's primary industry. In fact, today the Quinnipiac is mostly ignored by the New Haven community, as there is little public access to it and few have confidence in the quality of its flowing waters. The few access points along Front Street have become rundown and are unused due to a lack of amenities.

Rediscovering the Connection to the Quinnipiac looked at a way to revitalize the New Haven area, particularly the Fair Haven neighborhood, by redesigning several greenspaces along the west bank of the Quinnipiac River and creating connections between these spaces to form continuous public access to the waterfront. Not only could this bring new vitality to the area by allowing people to reconnect with the water, but it could also be a way to utilize public open space in a positive manner to reduce stormwater runoff into the river, thus helping improve the quality of water. *Rediscovering the Connection to the Quinnipiac* may also help set a new standard for waterfront development in New Haven, further improving water quality and public access to a natural feature that should be seen by the community as an asset. The Quinnipiac River has a rich history that should be celebrated and continued.

The idea of revitalizing waterfronts is not new. Designing them in a way that is positive for the community *and* for the surrounding environment is less common. Landscape architects have the opportunity to implement best management practices to better care for the ecology of the site and connected areas. *Rediscovering the Connection to the Quinnipiac* shows how a public waterfront can be designed to be aesthetic, active and environmentally sensitive and restorative, while also giving a community a greater identity.



BACKGROUND & LITERATURE REVIEW

New Haven, Connecticut is a relatively small urban community that has turned its back on the three major rivers that go through it. The largest river of these is the Quinnipiac River. The “Q River,” as it is often called, has a rich history and was central to the settling of the area in the late 1600s. Unfortunately, a lack of good public access has caused many to forget that the river is even in the area. Three parks along the river have become dilapidated, do not address ecological concerns and have little visibility to the city of New Haven. The redesign of the Quinnipiac River Park, Dover Beach and Front Street Walkway would bring vitality back to the river and establish good public access, which would hopefully encourage the city of New Haven to enforce public access easements along other properties so that one day a greenway could connect the multiple parks. *Rediscovering the Connection to the Quinnipiac* looked at the problem of how one redesigns an urban park to reconnect the community and the waterfront.

The following literature review addressed four key areas in looking at how to redesign these parks. The first was Modern Parks/Community Impact, which looked at standards and studies concerning urban public parks, addressing not only landscape issues, but also ethnicity, accessibility, and how to create successful partnerships to maintain the parks’ vitality, long after being built. The second area was New Haven, which looked at the general history of the place and changes that have occurred over the years, shaping it into the city it is today. This area set the context for the rest of the project. The third area the literature review addressed was Ecology. The Quinnipiac is a tidal river with an estuary. The redesign of these parks offered an opportunity to start to look at how to redesign the banks to create a healthier ecosystem, and how these parks could act as habitat for a variety of species. The last area this paper reviewed was the literature involving Case Studies around urban parks and parks that focus on ecological restoration.

Modern Parks/Community Impact

When reviewing the literature, it seemed crucial to look at what “modern” park design entailed. The ideologies and considerations within park design have evolved over the years, as can be seen in Hall and Mertes’ Park, Recreation, Open Space and Greenway Guidelines (Hall & Mertes, 1996). The National Recreation and Park Association had authors Hall and Mertes create writings based on the work of a joint task force made up of about 60 professionals who felt it was time to revise the document for *Park, Recreation, Open Space and Greenway Guidelines*. This document was then put into book format. The book stated that the philosophy behind park, recreation and open space design has and is changing. The focus has and is slowly shifting to how we can provide these types of resources for the generations of the future (Hall & Mertes, 1996). Though standards for elements such as athletic fields remain the same, the book addressed how community members became more interested in preserving natural landscape elements such as wetlands, forests and prairies. The 90s also brought a greater interest in



including historical, cultural and natural heritage into park spaces. Hall and Mertes also emphasized the importance of designing for uses, including those of the disabled (Hall & Mertes, 1996). Boland and Cranz's "Defining the Sustainable Park: A Fifth Model for Urban Parks" echoed Hall and Mertes' feelings that park design had evolved by explaining the changing types of park. They felt that designers had recently created a fifth type of park, the "sustainable park" (Boland & Cranz, 2004). Boland and Cranz believed that today's parks rotate or are a cross between an open space system type and the sustainable type. The open space system type focuses on user participation while it also revitalizes a city; it is about free-form play, arts and music and can be a very small and sometimes irregularly shaped space; the users are mostly urbanites close to the site. The newer type, the sustainable park, focuses more on human and ecological health and provides a space for both passive and active recreation such as hiking, biking, and bird watching; it offers an opportunity to use the site for education and stewardship; the plants are mostly native and are surrounded with permeable surfaces; wildlife benefits as well as humans; and cities also benefit from having actual nature within them (Boland & Cranz, 2004).

Hester, Blazej and Moore also addressed the issue of a more "native" landscape in the context of a park. Some have felt that too many conflicts are created when one tries to design "urban wilderness" between the human users and the need to protect the ecological elements. Hester et al. attempted to correct this myth with support from studies showing that biodiversity is actually protected better in sites that are controlled than the wild itself. Another myth the authors wished to disprove was that minorities do not appreciate wilderness parks. Hester et al. again cited research to the contrary, which showed that minorities are often new and first time users of such parks (Hester, Blazej & Moore, 1999).

The shift of park design towards that which protects the environment and the importance of meeting user needs are the major recurrent themes throughout the literature. Meeting the user needs ties in greatly with whether or not a park succeeds, according to many of the authors. In their Regeneration of Public Parks, Fieldhouse and Woudstra stated that "...visitor numbers have declined steadily in the second half of the 20th century, a fact that can be attributed to factors such as car-borne recreation, a lack of modern attractions, vandalism, poor security and indifferent standards of maintenance" (Fieldhouse & Woudstra, 2000: 3). This statement completely went in the face of Berens and Garvin, who said only three years earlier, "Our parks have never had as many visitors as they have now, and many suffer from overuse and insufficient public funding" (Berens & Garvin, 1997). It is possible that England, where Fieldhouse and Woudstra were writing from, has experienced completely opposite problems in way of user numbers, but both seem to be concerned with meeting user needs.

Francis wrote extensively about user needs. Not only does he address why parks fail, but also the principles of creating successful public spaces. Francis emphasized the need for safety to be designed and suggested that one way to determine if a park has a safe feeling was if there are a large percentage



of female users. Besides addressing basic elements that are crucial to a successful park, he also addressed cultural differences that must be considered in design. He echoed Hester et al. and the studies that indicate that “people of color appreciate the benefits of urban wilderness and are one of the groups most supportive of open space land acquisition and park development” (Francis, 2003: 31). Francis emphasized the need for community participation in creating successful open spaces and for the landscape architect to work to educate their client but also listen to them when it comes to determining how to design space (Francis, 2003).

The modern park takes into account several considerations. Various authors within the last ten years have emphasized how important it is to acknowledge user needs in one’s design and how these users include a wide variety of people, so it is crucial to understand who they are. Urban wilderness is becoming more common and even desired, but with it comes certain conflicts that must be overcome to create a place that balances the needs of the human user and the ecological protection of the site and surrounding areas. The various tables and ideas presented within these texts were the starting point for creating a program for the three parks being addressed in the project.

New Haven

Understanding the context of place is one thing that has not changed throughout the years when designing a park. Since most of the authors reviewed for Modern Parks felt the major issue was addressing user needs, it only makes sense to have reviewed the population surrounding the site, the people of New Haven, Connecticut. Hall and Mertes had also noted how important it is to many communities to have their history incorporated into park and open space design, which led to the literature looking at New Haven’s beginnings.

Townshend, a local member of the New Haven Preservation Trust, was a necessary author to review because she not only knows the area intimately, but also has befriended those who know its past. Fair Haven: A Journey Through Time focused on the neighborhood immediately adjacent to the Quinnipiac River, Fair Haven. Understanding this area’s past as an oystering community led to design elements which reflect not only New Haven’s historical oystering community, but also today’s and the future’s. Knowing that the oyster industry is an important economic base for many in the New England area helped with the understanding of how crucial it was to protect and help clean the waters from which they are harvested. Townshend’s book looked at how the neighborhood’s name and population make-up changed from its original “founding” (Townshend, 1976).

Caplan took a different approach at looking at the history of New Haven. A photo compilation showed images of the past next to the images of the present. These images gave a clearer view of how the city’s needs and economic stability has drastically shifted since the 1800s and early 1900s (Caplan, 2006).



Brown also used images, but her book was heavily supplemented with text explaining the images of historic buildings that currently remain in New Haven (Brown, 1976). Her “walking tour” format allowed one to take a mental walk through the community to get a better sense of the sites that stayed important to the community throughout the years. Brown also looked at additions that have been made to the city and how that impacted its growth and development (Brown, 1976). This helped explain how the different ethnic neighborhoods were created. The City of New Haven’s webpage (www.cityofnewhaven.com) provided immeasurable information about the city—its past, present and hoped future. The City Plan section had numerous documents that helped create a better understanding of the goals and plans of New Haven. The site also had design ideas for various areas that the city would like to revitalize, giving an indication of what the city felt was important in redesigning an area. Understanding the different events, activities and programs the city had was another way to understand the people of New Haven, the future users of the site. Looking through these pages also helped see where New Haven may be missing opportunities to improve as well.

The last source reviewed about New Haven was to get a clearer picture of what park elements have been important to the city in the past. New Haven Outdoors: A Guide to the City’s Parks separated out each of the city’s parks and explained history and current conditions of each. The editors stressed that one reason they have put out the book is so that the community would be better aware of the parks’ significance and hopefully put up more of a fight to protect them, as new schools have a tendency to encroach upon them (Hegel & Shumway, 1990). Since this book specifically addressed two of the three park sites, it gave a better feel for the significance they have had in the past and in what ways they were currently failing their users.

Ecology

Since many authors addressed the fact that the modern parks are more in-tune with environmental considerations and a review of New Haven’s history showed the necessity of the oyster industry, it was only right to review literature on ecology and how it related to urban parks. The Quinnipiac River is unique because it is an estuary in the New Haven area, making it an ecologically sensitive location. These factors, combined with the impending threat of sea level rise meant that the environment must take a front seat when it comes to design issues along such a unique ecosystem.

The literature topics revolving around ecology are extensive. Research can be done on issues pertaining to bank stabilization, estuaries, appropriate riparian buffer plants, et cetera, or on case studies that demonstrate how such issues were taken into consideration for a similar design problem. This literature review looked at a little bit of each. Adams wrote about how the urban environment has not only reduced habitat but also drastically changed it (Adams, 1994). An interesting point mentioned by him is that many species do not seem to be bothered by noise pollution even if other types of pollution



do affect them. He continued on, giving suggestions of how to create habitat within landscape design and also had a helpful list for plant material that encourages wildlife, divided by regions. Bradshaw et al., took a look at ecology and how it could connect with design in the landscape. Though not as specific as Adams in relationship to individual plant suggestions, Bradshaw et al., made general guidelines for how to incorporate ecology into the management of the park (Bradshaw et al., 1986). To return to more specific guideline guidance for specific plant material ideas, Tiner's A Field Guide to Coastal Wetland Plants of the Northeastern United States provided plant suggestions based on the conditions (i.e. rocky shores, tidal flats, et cetera). This combined with Adams' list was extremely helpful when trying to determine what plant material to use along the river to help restore original habitat.

Several journals had case studies referring to how designs related to their adjacent sites in an ecologically responsible way, but one case study stuck out, and that was the Maryland Department of Natural Resources website on the Maryland Shorelines. Maryland, as an eastern state, has similar coastal issues and had a section on "living shorelines" so that there are optional solutions to using sheet piling or seawalls (<http://shorelines.dnr.state.md.us>).

Estuaries are extremely unique and delicate ecosystems. Kennish's book, Estuary Restoration and Maintenance: The National Estuary Program took a close look at various estuary restoration projects across the country. The chapter on Long Island Sound can be compared to other estuary projects to see where areas of improvement are needed, especially concerning the rivers that feed into it, like the Quinnipiac (Kennish, 1999). There were few good sources on estuaries, but this one had a good overview to understanding the estuary ecosystem as well as detailed case studies. To take this information to the next level, the designer looked at the Long Island Sound Study by the EPA's Office of Long Island Sound Program (OLISP). Here the information in Kennish's second chapter was expounded on with all the information available for research being done on the Long Island Sound. OLISP had also created numerous best management sheets on issues like lawn care to improve the health of the water. These BMPs were used as design guidance along the river banks.

Case Studies

Riverfront revitalization is hardly a new concept, so there are many great urban examples. Since the Quinnipiac still relies heavily on its industrial sector that utilizes the water, many of the case studies did not quite fit the possibilities for the river's shores, but still offered a variety of creative solutions to a number of waterfront issues, especially concerning public access. The most applicable case studies involved those from New York City, since it too has two estuaries and at only an hour and a half away, many of the people in New Haven see NYC as an extension of home. Betts looked at how the New York waterfront has evolved over the last 250 years or so (1997). Much of New Haven's history follows along the same lines of New York City's, but is probably still a bit behind as most of the riverfront has already



been given back to the New Yorkers with various public access points. Blum and Van Valkenburgh and Associates also looked at how the New York riverfront is being revitalized (Blum, 2007; www.mvvainc.com, 2007).

Besides places like New York City (Betts, 1997; Blum, 2007; www.mvvinc.com, 2007), Seattle (Maryman and Maggio, 2004), Portland (Hinshaw, 2001), Boston (O'Connell, 2001) and a few others (Fisher, et al., 2004), the United States is fairly behind our European counterparts in the way of public access to waterfronts. Numerous case studies out of Europe were found concerning how to give the waterfront back. Many of these sites emphasized the importance of partnerships to share what has been learned in redeveloping these waterfronts. CoPraNet, a program under the EU's Regional Development Fund, represents partners from eleven EU countries. They share information about best management practices, coastal erosion, beach management and sustainable tourism in coastal zones. Many of these practices can be applied across the pond along our coasts and waterways that release into our oceans. In order to see which of the EU's projects are more successful, the site provides over 150 case studies and 178 projects for review. This site is added to as more projects are completed, making a site that can be constantly referenced for the newest solutions. Beaumont, the director of WaterfrontExpo, provided information about case studies all over the world and addressed the fact that there are teams of various professionals that must be involved for these types of projects to be successful (www.WaterfrontExpo.com, 2007). There seemed to be significant overlap between these various sites on the best solutions for issues like coastal stabilization and public access.

The literature reviewed for this project helped create guidelines and checklists for the design's program. Several issues that authors looked at today were different from those that were looked at in the past. Though New Haven is its own unique place, examples from all over the world could help create the best design possible for its shores. Between the four areas of literature reviewed, there was much overlap within the texts, making it easy to see how waterfront public access directly relates with the modern park and ecology. Case studies offered samples of what is being done in the field now so that the design was not trying to reinvent the wheel, but rather attempted to take current design ideas to the next level. Design is ever evolving, as shown within many of these texts, and this project drew on this information to find the best solutions possible.





PROBLEM STATEMENT

PROJECT SIGNIFICANCE

Rediscovering the Connection to the Quinnipiac is significant for several reasons. New Haven is geographically significant, centrally located near major New England cities, including New York and Boston. The city of New Haven is one of the earliest planned cities, yet has lost much of its glory over the years due to the loss of industry and a connection to the bodies of water that flow through its borders. The Quinnipiac River played a critical role in the founding of this city by acting as a resource for food for early settlers. The area surrounding the site is ecologically significant, as it is an estuary and has an extensive marsh.



martinsoysters.com.au



(Above) Eroding edge at Quinnipiac River Park

Today, there is little public connection to the "Q" as locals call it. The community members that live along its waters see it as an asset for their neighborhood, but it is nearly invisible and inaccessible for the greater New Haven Community. Recent development along the water has been private housing, making it even less possible for the public to connect to the water that was once one of the greatest resources to the city. The public access points that do remain lack interest and aesthetic appeal. Redesign of these spaces and creating

a greater connection between them brings amenities for users, as well as a restoration of some of the local habitat, reconnecting the community with the ecology of the estuary.

Redesign of the waterfront makes the Front Street neighborhood a destination for those in the surrounding area, as well as giving the neighborhood a visual identity. Users find places for active and passive recreation, nature viewing, boat launching, and event space. The redesign of the public access points along the Quinnipiac also offered an opportunity to repair eroding banks and create better protection for their future health.



(Above) *Spartina alterniflora*, a native salt marsh grass, revegetating along Dover Beach Park



PROJECT SIGNIFICANCE

REDISCOVERING THE CONNECTION TO THE QUINNIPIAC

PROJECT REQUIREMENTS

Users:

- Various ethnic groups in Fair Haven and in the Greater New Haven area
- Children
- Dog owners
- Bird/wildlife watchers, wildlife
- Adjacent homeowners

Rediscovering the Connection to the Quinnipiac strived to address several suggestions raised by community members at the charette in New Haven. Using these as a starting point, a list of goals and objectives was created for the spaces within the Front Street Neighborhood :

- Safeguard wildlife sanctuary and wetland
- Full involvement – Q-Terrace with our community
- Harvest seafood directly from river
- Street art – art walk showcasing local talent
- Water transportation (Taxi/Dinner-Dancing boat)
- Retail/Commercial – Grocery Store and viable restaurants
- Signage welcoming to neighborhood
- Permanent home for Louis Kahn Barge
- Bike lanes on Front and in parks
- Waterfront lighting
- River Walkway on Front St. Side
- Sidewalks on River Side (oyster shells)
- Underpass Art (Middletown and Front)
 - Lighting, no chain link fence
- Gateway – welcome
- Public access to the river (Chatham to Grand)
- Re-landscape Lewis Street Park
- Separate areas for kids and dogs
- More child-friendly spaces
- Playground at Q Park (sculptural by Brewery Square)
- Educational signs about nature/river/protection of both/etc.
- Improved plantings
- Fish/bait cleaning area (Q Park)
- Fishing pier

PROJECT REQUIREMENTS

REDISCOVERING THE CONNECTION TO THE QUINNIPIAC



PROJECT REQUIREMENTS

Site Goals and Objectives:

Revitalize public open space along the Quinnipiac

- Provide amenities for an urban community
- Create greater access to the water for canoe and kayak launching
- Separate active recreation and passive recreation

Meet ecological needs of the area

- Stabilize banks with mixture of hard and green engineering
- Utilize native plantings
- Create vegetative buffers to help clean runoff before it enters the Quinnipiac River

Create connections between the three spaces

- Create greenway connection along water – increasing public access
- Use consistent materials to create identity for green space along the west bank of the Quinnipiac

PROGRAM

Overall Master Plan:

- New bank treatment/stabilization
- Cohesive Streetscape
- On-site stormwater treatment before discharge
- Ample lighting for safety
- Well defined paths to public access points.
- Overlook points at key view locations
- Bike/Walk along street
- Riverwalk

Dover Beach Park

- Boat launch
- Fishing area
- Playground
- Active play space for youth
 - Sports court

Lewis Park

- Dog park/area
- Tot Playground

Quinnipiac River Park

- Boat launch
- Fishing station
- Playground
- Passive space
- Large open space for concert seating
- Walkway
- Signage (explain estuary, history, etc)



PROJECT REQUIREMENTS

REDISCOVERING THE CONNECTION TO THE QUINNIPIAC



METHODOLOGY

DESIGN PROCESS

Rediscovering the Connection to the Quinnipiac attempted to seek the best possible way to address the redesign of three riverfront greenspaces along the Quinnipiac River in New Haven, Connecticut in order to revitalize the community while also improving the future health of the estuary. The method of research included case study review, and a review of numerous other pieces of literature in order to better understand current trends and issues in park design and riverfront redesign. The information gathered led to a master plan that connected the three greenspaces with a waterfront greenway system, and also a site plan of the Quinnipiac River Park with details of specific areas within it.

Besides an extensive literature review and analysis, meetings with Karyn Gilvarg, the executive director of New Haven City Plan, other City Plan officials and local green space advocate and involved citizen, Christopher Ozyck took place to gain a better understanding of the City's vision for the parks. These meetings also offered an opportunity for feedback as the design progressed. Since communities sometimes see things differently than official city representatives, a design charette took place in January, 2008 in New Haven with 26 local community members in order to receive their input about what they would like in the parks and would like to see in their neighborhood in general. The charette was run by the designer with help from Chris Ozyck. From the information gathered at this meeting, a priority list was created to demonstrate which needs were the most important to the community and then to the city so the lists could be compared against one another to see what solutions may solve both sets of concerns. These lists were also looked at against current literature to see how the community's ideas fit in with ecologically aware solutions and how the city could possibly be pushed to be more open to new ideas and forward thinking design guidelines.

With the collected data and analysis of it, design guidelines and then a program were created in order to direct how the parks were to be laid out and what the issues of the redesign of them would entail. The designer then walked the site(s) and created a site inventory and analysis. Upon completing the site inventory, the designer discovered several elements which could help create a unified identity for the Front Street Neighborhood. Observation of the site revealed severe erosion problems in several areas, especially along the water's edge of the parks. Failed sea walls and inappropriate erosion control systems led to weakened support and a more vulnerable ecosystem. An analysis was created in order to synthesize the opportunities and constraints based on what was found during the site inventory. After completing the site analysis, two conceptual plans were created which synthesized the information together. Ideas from these plans were merged together to create a final master plan for the three main spaces and a riverwalk connection. A site plan of the Quinnipiac River Park was also created, so that the community could help New Haven push forward in redeveloping these parks. Key design elements are further explored in support graphics and details.



DESIGN PROCESS

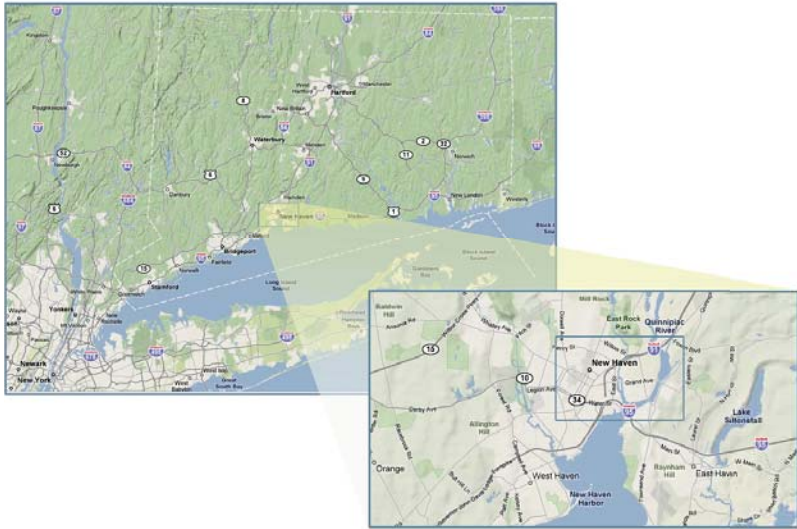
REDISCOVERING THE CONNECTION TO THE QUINNIPIAC

SITE VICINITY



New Haven is located in Connecticut, in the northeastern part of the US. It is:

- 760 miles outside of Muncie, Indiana
- 450 miles from Pittsburgh, PA
- 140 miles outside of Boston, MA
- 80 miles from Grand Central Station, NYC



The city of New Haven is just north of New Haven Harbor, which flows into the Long Island Sound. Three rivers go through the city: West River, Mill River and the Quinnipiac River from west to east, respectively.



The Front Street Neighborhood is located on the east side of a larger “neighborhood” called Fair Haven. This neighborhood is a peninsula created by the Mill and Quinnipiac Rivers.

The site, highlighted as a green strip, is approximately 2 miles from Yale University’s campus.

www.google.com/maps

SITE VICINITY



SITE DESCRIPTION

The site includes Front Street (fuchsia line) and the land between it and the Quinnipiac River in New Haven, Connecticut, stretching for about 1.5 miles. The green spaces in the neighborhood include the Quinnipiac River Park (teal box) and the Front Street Walkway (yellow box), which connect along the southwest side of the Quinnipiac River; Front St./Lewis Park (blue box), which is created by the intersection of Front and Lewis Streets; and Dover Beach Park (orange box), which sits along the Northwest side of the Quinnipiac River. These three spaces sit in the Fair Haven neighborhood, one of the most historic areas of New Haven. The northwest site (Dover Beach Park) and the southwest site (Quinnipiac River Park and Front Street Walkway) have different user types, but both areas provide waterfront access in a locality where public access is limited. Front Street, which runs along the entire length of the river's west bank within New Haven, borders the west side of both spaces. Dover Beach Park also has I-91 just above its northwest corner. The Quinnipiac River Park runs into the Front Street Walkway to the south, and then the walkway runs into the Ferry Street Bridge, which is expected to be under construction for at least the remainder of this year. To the north of the Quinnipiac River Park is the Grand Avenue Bridge, a turnstile, which opens for oystering and fishing boats daily.

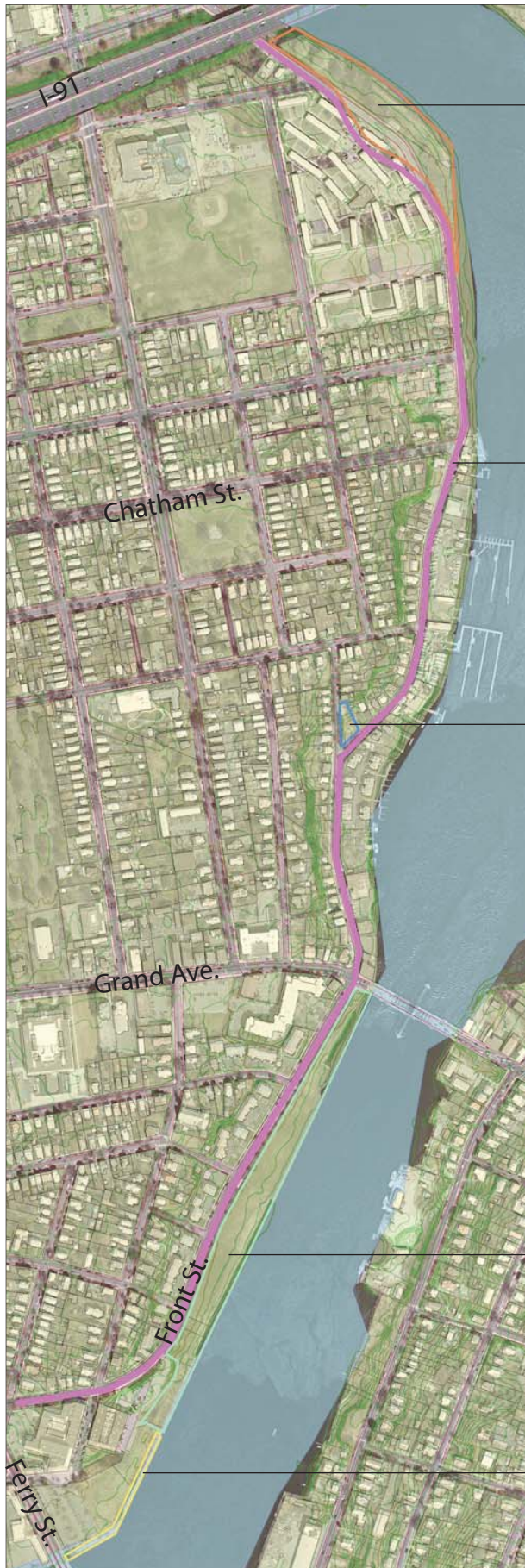
Dover Beach Park, a 3.5 acre parcel, lies along the new Hope VI public housing development. This neighborhood is laid out in a new urbanist fashion, with beautiful homes. The community is made up primarily of African Americans, so they will make up the principal user group of this park space.

The Quinnipiac River Park is a four acre site, lying across the river from an oystering company and just east of recently built homes. Formerly an industrial space, the currently simple space was created in the late 1980s to provide public access to the people of Fair Haven. The Grand Avenue Bridge, which borders the north side of the park, is currently the only local road bridge in New Haven that brings people across the river. Users range since the bridge makes the park easily accessible at the northern point. There is a small farmers' market that takes place every Thursday during the summer, and concerts are held on the site and from boats along the river. The current promenade extends south of the park, becoming the Front Street Walkway. The current walkway has fallen into disrepair as a sinkhole has engulfed much of the path.



SITE DESCRIPTION

REDISCOVERING THE CONNECTION TO THE QUINNIPIAC



Dover Beach Park: Approximately 3.5 acres

Front Street: About 1.5 mile stretch

Lewis Street Park

Quinncipiack River Park: Approximately 4 acres

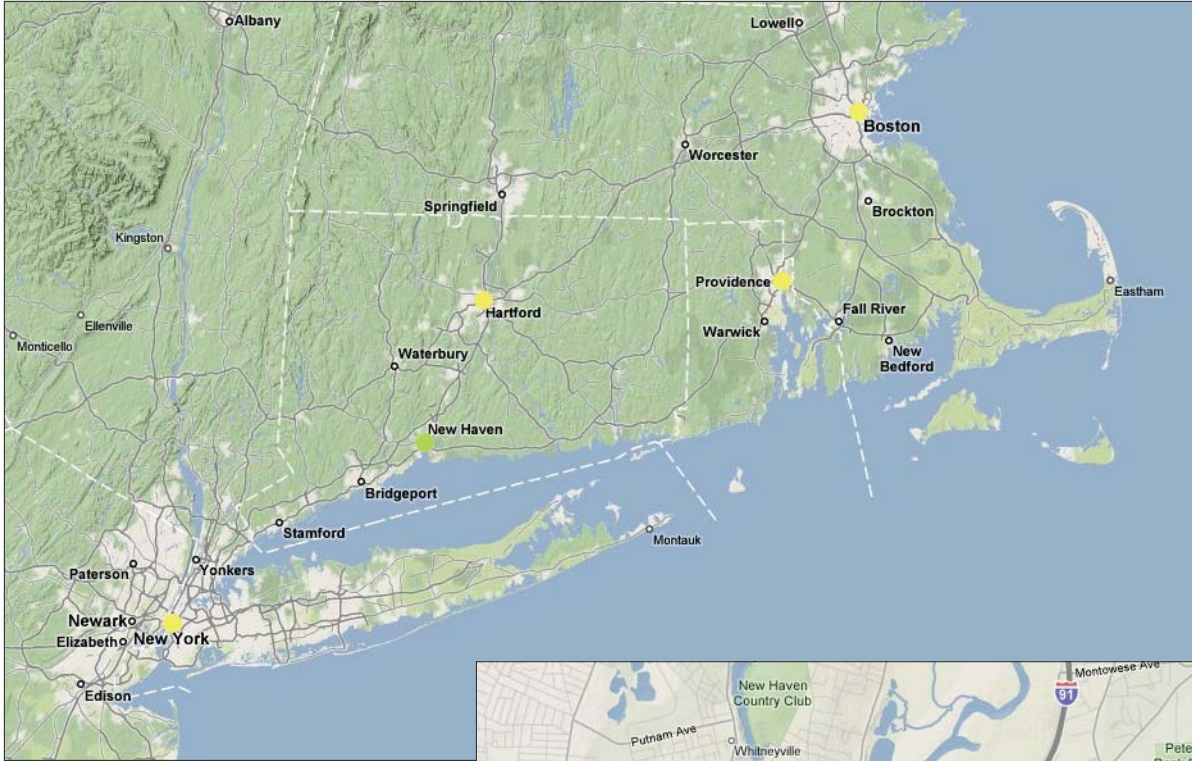
Front Street Walkway

SITE MAP

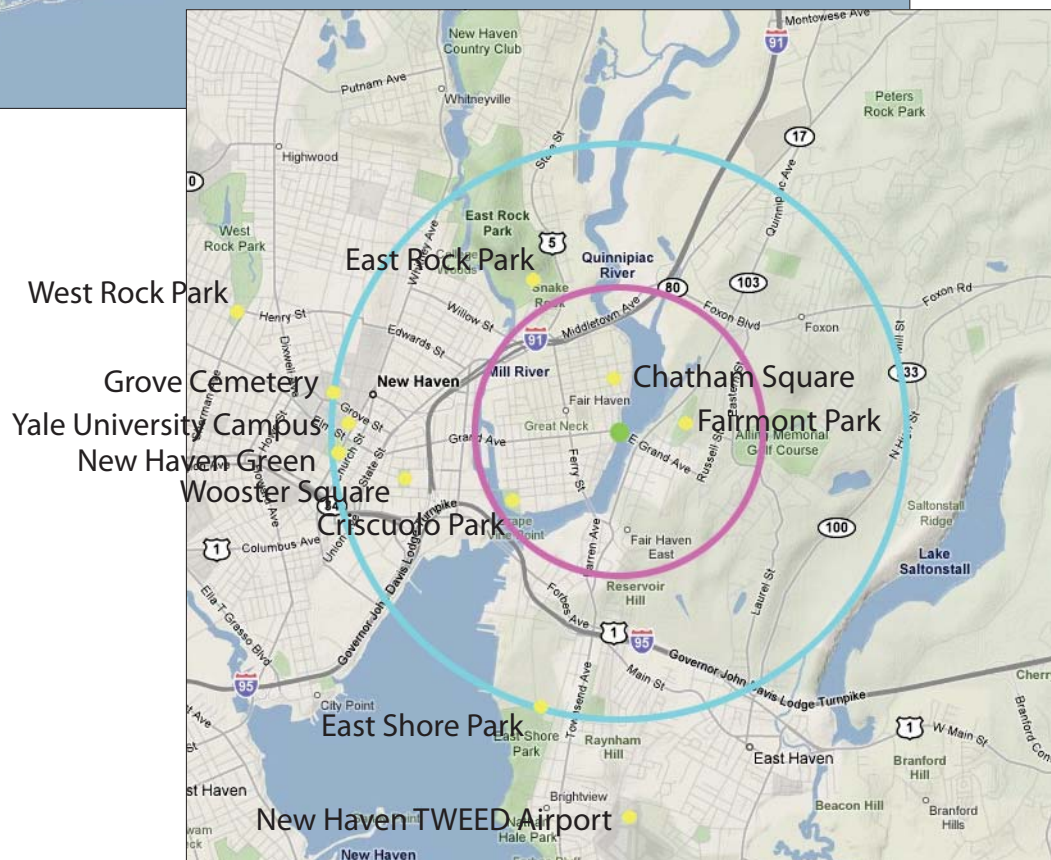


REDISCOVERING THE CONNECTION TO THE QUINNCIPIACK

SITE INVENTORY: CONTEXT



**MAJOR CITIES
WITHIN 3 HOURS**



PARKS/POINTS OF INTEREST WITHIN 3 MILES

Blue Circle = 2 miles

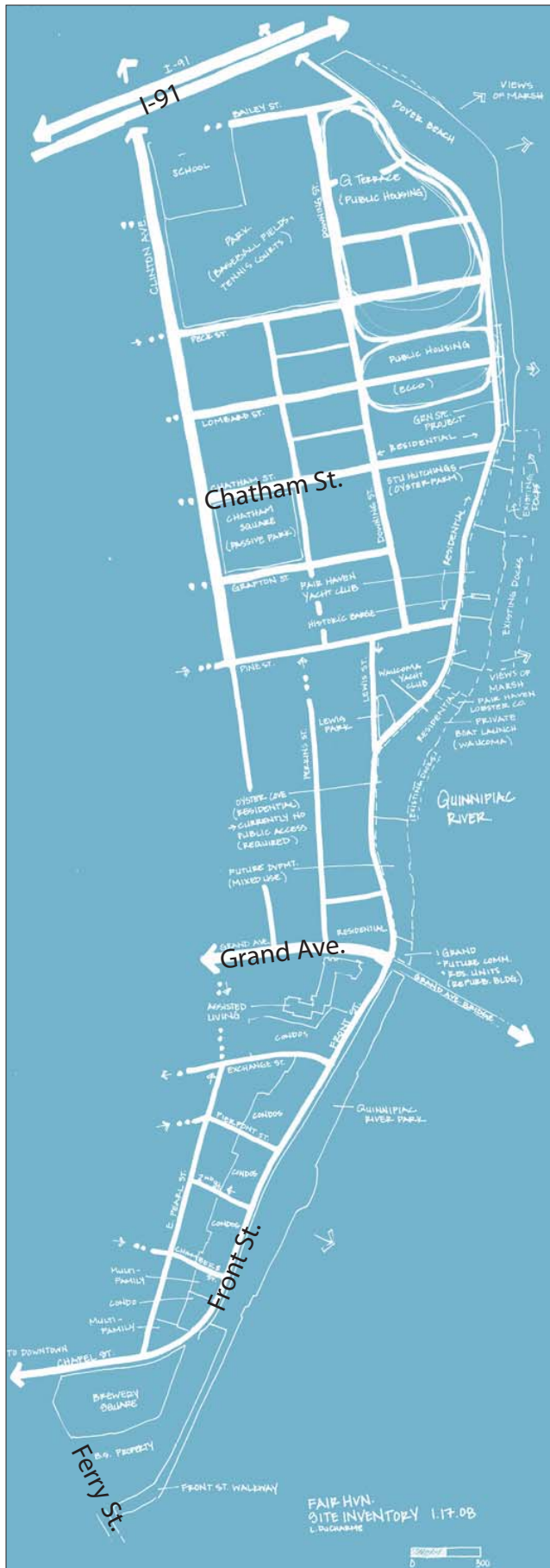
Fuchsia Circle = 1 mile



SITE INVENTORY: CONTEXT

REDISCOVERING THE CONNECTION TO THE QUINNIPIAC

SITE INVENTORY



Zone 1: I-91 to Chatham St.

- Dover Beach Park
- Q Terrace – Hope VI Public Housing Project in Progress/ Ecco Public Housing (Rent/Own)
- Clinton Avenue School (K-7)

Zone 2: Chatham St. to Grand Ave.

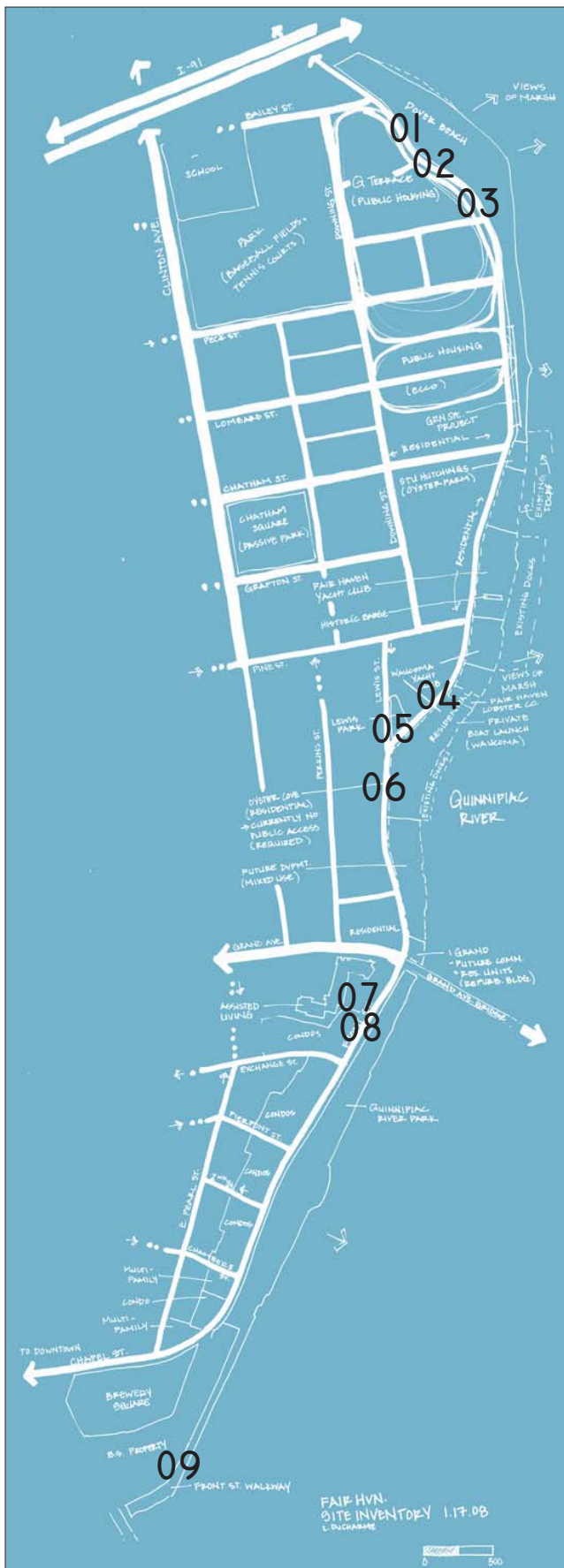
- Chatham Square
- Oyster Farm
- Fair Haven Yacht Club (Historic Barge)
- Waucoma Yacht Club
- Lewis Park
- Fair Haven Lobster Company
- New/Future Residential and Mixed-Use Development

Zone 3: Grand Ave. to Ferry St. Bridge

- Quinnipiac River Park
- Subsidized Apartments
- Recent Condo Development
- Brewery Square Residential

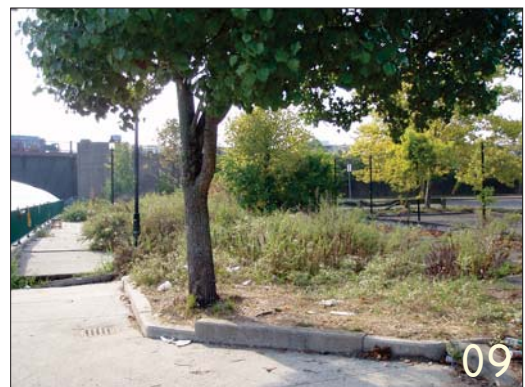
SITE INVENTORY





SITE IMAGES

REDISCOVERING THE CONNECTION TO THE QUINNIPIAC



SITE IMAGES

REDISCOVERING THE CONNECTION TO THE QUINNIPIAC



OPPORTUNITIES/CONSTRAINTS

Opportunities:

- + “Green” infrastructure for bank stabilization (All Zones)
- + Cantilevered walkway for public access (Zone 2)
- + Overlook dock for views of marsh (Zone 1)
- + Improved street (community moving towards idea of “complete streets”) (All Zones)
- + Active spaces within parks (e.g. playgrounds) (Zones 1 and 3)
- + Docks for water access to the parks (Zones 1 and 3)
- + Boat launches for canoe/kayak access (All Zones)
- + Art Installments (All Zones – particularly at gateways and key view areas in Zones 1 and 3)
- + Neighborhood history – incorporated through design elements (furniture, art, signage, etc.) (All Zones)
- + Marine culture (lobster shop, oyster farm)
- + Natural features of estuary

Constraints:

- Safety issues – lighting and “safe” plantings
- Low elements in parks to avoid perceived blocking of views
- Estuary conditions – salt intrusion frequent – limited plant pallet
- Water access only for boats – water too contaminated for swimming
- Limited public access easements controlled by city
- Low maintenance – parks department does very minimal maintenance





SITE ANALYSIS

REDISCOVERING THE CONNECTION TO THE QUINNIPIAC



CONCEPT: RECONNECTING WITH THE Q

Main Focus

- Open Space
- Overlooks
- Play space

Conceptual Plan Focus

- Continuous waterfront access

"Reconnecting with the Q" focused primarily on a riverfront walk that forced public access on all properties bordering the river. **Zone 1** (from I-91 to Chatham St.) consisted mainly of Dover Beach Park, which is divided into 5 major areas of activity: Natural (tan), Open Space (light green), Recreation (fuschia), Overlooks/Walks (Darker Green) and Boat Launch (Blue).

Zone 2 (Chatham St. to Grand Ave) is a more commercial area, so the focus was on creating business that brings the community to the water and waterfront access via paths and plazas. There is currently a private boat launch that was suggested to become public.

Zone 3 (Grand Ave to Ferry St. Bridge) consisted mainly of the Quinpiac River Park and the Gateway at Grand Ave and Front St. An extension of the park was suggested on the grounds of the nearby subsidized apartment and a new parking garage just a block away allowed for large events to be held in the park. This zone was divided like Dover Beach for maximum user potential.



DESIGN CONCEPT: RECONNECTING WITH THE Q

REDISCOVERING THE CONNECTION TO THE QUINPIAC



CONCEPT: RESHAPING THE EDGE

Main Focus:

- Open Space
- Overlooks
- Play space

Conceptual Plan Focus

- Push and pull of the bank
- Renaturalization to connect visually with the marsh and to reduce erosion

"Reshaping the Edge" looked at how to create greater interaction between the water's edge and the land by pushing land out and bringing some of the water into the site. Though the division of the areas changed minimally from "Reconnecting with the Q," the edge treatment changed substantially. Riverwalks were pushed further back from the water in many areas to allow for vegetative buffers and engineered erosion control systems.

This concept also took a closer look at how to incorporate art into key visual points. Overlooks became more pronounced in "Reshaping the Edge" since the consistent water access does not exist in this plan.

DESIGN CONCEPT: RESHAPING THE EDGE

REDISCOVERING THE CONNECTION TO THE QUINNIPIAC





MASTER DESIGN



MASTER PLAN

MAJOR ELEMENTS

Zone 1: I-91 to Chatham St.

Zone 1 has an extensive vegetated border for stormwater control and to create a visual connection to the marsh.

A large ellipse green is an elevated lawn that creates a grand entrance for the park, and provides users with elevated views of the water. An extension of the northeast part of the ellipse actually extends into the water as an overlook.

Zone 2: Chatham St. to Grand Ave.

To create more “points” along the walk that propel the pedestrian forward, a historic barge that acts as the landmark for the Fair Haven marina is highlighted by adding a restaurant and public access plaza and overlook.

Another “point” along the path, Lewis Street park needed simple adjustments. The new design separates spaces for dogs and for children.

Zone 3: Grand Ave. to Ferry St. Bridge

Bermed greenspaces create an atmosphere for performances and festivals.

The Front St. Walkway is extended under the bridge to connect to the new River Street Walk.



MASTER PLAN

REDISCOVERING THE CONNECTION TO THE QUINNIPIAC

MASTER PLAN

Rediscovering the Connection to the Quinnipiac meets the three major goals: Revitalize public open space along the Quinnipiac; Meet ecological needs of the area; and Create connections between the three greenspaces in various ways, depending on the context of the immediate area and zone. Zone 1 has a strong focus on meeting the revitalization of public open space, striving to create amenities for the Q Terrace Hope VI housing community. Passive and active space are balanced in Dover Beach Park and a cantilevered walk and overlook connect Dover Beach Park to Zone 2, consisting mainly of commercial spaces. The ecological needs of the area are also crucial, as Zone 1 is just across from the marsh of the estuary. These needs were met through a riparian buffer and naturalized area, meant to help reduce stormwater and provide habitat while also forming a visual connection to the marsh.

Zone 2 revitalizes open space by introducing new concepts of it in the area. A restaurant with a public plaza creates public access, but not as green space. Public access is also formed through a cantilevered riverwalk along the edge of condo development and new mixed use development. This walk intersects with Grand and then continues into Zone 3 as an interior path and then a boardwalk. Zone 3 also had revitalized public open space by the addition of amenities including a boat launch, playgrounds, naturalized area and overlooks. Active and passive recreation is separated by elevation changes and plaza spaces. Stabilization of the banks is primarily provided through vegetated terraced gabions and an additional narrow riparian buffer.

Connections between the primary greenspaces (Dover Beach Park, Quinnipiac River Park and the Front Street Walkway) are created literally with the riverwalk and streetscape and visually through the use of materials and form language. Since oysters have played such a historic and current role in the story of New Haven, oyster shells are used extensively as material - for walls and “groundcover,” as well as aggregate in concrete sidewalks. Repetitive native plantings along the entire stretch also connect the site through materials. Lighting, benches, trash receptacles and signage types are kept uniform throughout the neighborhood. The materials and furniture are addressed more thoroughly in Appendix B. Organic form language continuously permeates the site through curved overlooks and reverse curve inlets.



MASTER PLAN (ZONE 1: I-91 to Chatham St.)

In order to meet the site goals and objectives, Dover Beach Park had to be extensively redesigned, as it has been a historic public open space and is ecologically significant, sitting across from the marsh. The ecological needs of the area are met through extensive riparian buffers that connect to a more naturalized area in the northwest part of the park. This area of Dover Beach Park is meant to be low maintenance and creates a large space for wildlife viewing and a reflective place for those who wish to see their close relationship with the natural beauty of the estuary. The buffer acts as stormwater control and creates a visual connection to the marsh. The riverwalk hugs the edge of the buffer so that users still have close access to the river, though to actually get into the river, the only entrance point is at the boat launch. Having a single entry point helps protect the edge and the natural grasses that have revegetated the area below the seawall. Parts of the seawall that need to be replaced are done so with gabions which relieve hydrostatic pressure, reducing erosion and wall failure, while also creating habitat and plantable spaces.

Passive and active recreation spaces are separated by the Great Lawn, which can act as either, while also creating a grand entrance to the park and a clear view of the river and the marsh. Northwest of the Great Lawn is passive space, with the naturalized area, as well as space for picnicking. Southeast of the Great Lawn is the active area, with the canoe and kayak launch and paddle zone, playgrounds and a basketball court. An overlook connected to the Great Lawn extends into the water slightly, "claiming" part of the river, but the canoe/kayak launch and paddle zone pull some of the water onto the site, balancing it out. Another overlook to the south of the park, across from Chatham Street, creates a space for people to observe oyster farming and/or enjoy the marsh.

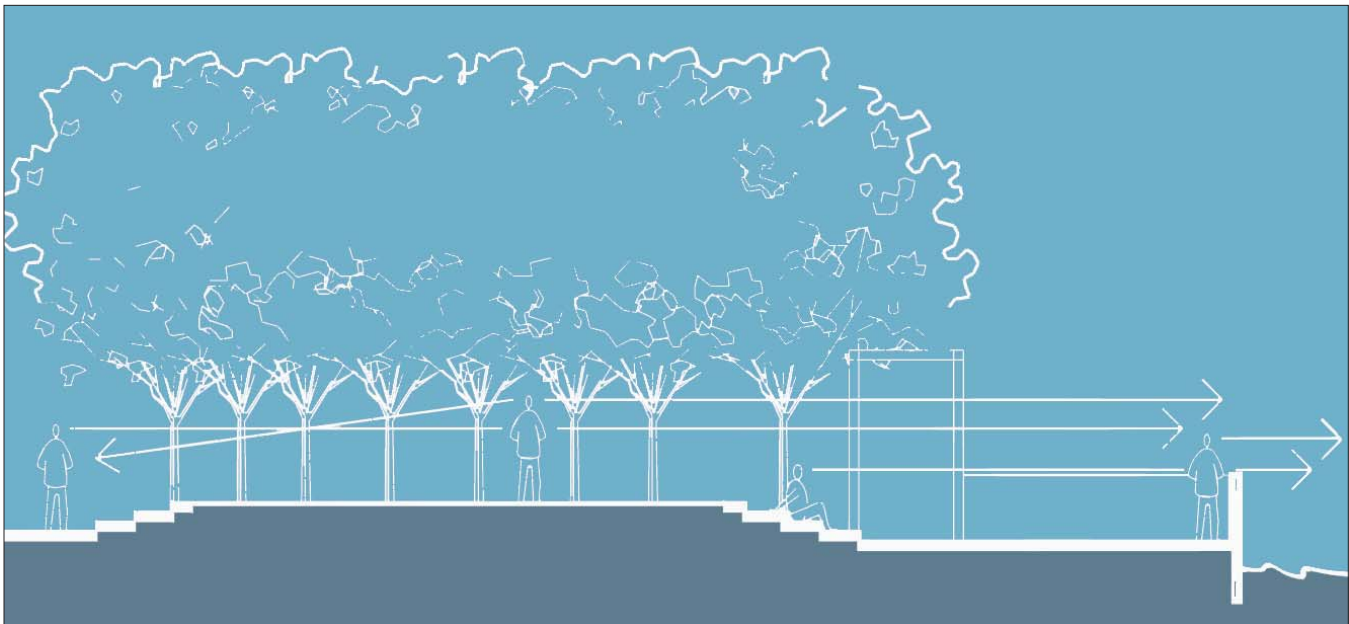


Fig. 1: Elevated Great Lawn Views



ZONE 1 MAJOR CONCEPTS

REDISCOVERING THE CONNECTION TO THE QUINNIPIAC



REDISCOVERING THE CONNECTION TO THE QUINNIPIAC



MASTER PLAN (ZONE 2: Chatham St. to Grand Ave.)

Since Zone 2 is primarily commercial along the waterfront, the goal was to highlight existing businesses as part of the unique character of the neighborhood. On the northern part of Zone 2 there is an oyster farm, the first in the area. Considering how crucial oysters have been to New Haven historically, and are today, this business can become a destination point as an educational center for the Quinnipiac. To give 24 hour access to the farm, a cantilevered overlook was created alongside the oyster farm property. Not only can people get a closer look at the farm and read about it on signage, they can also enjoy boat watching, as the marina and docks are about a block away.

The next significant “point” along the connecting path is a grounded historic barge. Though too dilapidated for people to enter, it has become a visual landmark for the community. Creating a mid-level restaurant neighboring the barge would allow for patrons to enjoy a closer look of the barge and to boat watch in the Fair Haven Marina. A plaza behind the restaurant forms a space for outdoor seating, as well as a public access point since Zone 2 has minimal appropriate spaces for a riverfront walk.

Another unique feature is the New Haven Lobster Company. Slight landscaping features and more transparent fencing would help mark the building as a destination point while adding to the visual interest of the Front St. streetscape.

Just southwest of the Lobster Company is Lewis Street Park. To end conflicts between dog owner users and children, the park is divided into two areas. The area immediately at the intersection of Front and Lewis would be fenced off as a dog park, to keep children further away from the traffic. This corner is also an excellent space to display public art, helping create an identity for the neighborhood. The back part of the parcel would be fenced off as a tot lot.

South of the park is a block of condos. New condo development, set to happen within the next few years, plans on having a public access riverwalk. Once built, it would hopefully be an incentive for Oyster Cove, the condo development just north of the new development area, to also develop a connecting riverwalk that was originally planned. The new development also has docks planned for an entertainment barge and water taxis. The taxis will help connect the neighborhood from the water. The boat launch areas in zones 1 and 2 can act as mini-ports for the watercrafts.



ZONE 2 MAJOR CONCEPTS

REDISCOVERING THE CONNECTION TO THE QUINNIPIAC

MASTER PLAN (ZONE 3: Grand Ave. to Ferry St. Bridge)

Zone 3 primarily consists of Quinnipiac River Park. Since Grand Avenue is currently the main bridge across the Quinnipiac River in this area, its intersection with Front Street lends itself to a gateway feature, both for the park and the neighborhood. This is done at the northwest corner of the park as a display of signage and public art. Behind this gateway feature is a naturalized area that acts as a riparian buffer and a peaceful area for visitors to stroll through. A series of concrete steps on the water side creates a reflective space for users to sit and enjoy the water. When tide is up, these steps will mostly disappear and act as a graceful seawall.

Currently, the park has no amenities except for the path that cuts through the park. The community of condos west of the park has concerns about elements that would block their views of the water. Taking into account these concerns, but also striving to meet the needs of the surrounding neighborhood, playgrounds were placed across from parking lots and sunken a foot to further reduce “blocked views,” though these are mostly perceived, as the equipment placed in the playground will not be one solid piece. Just south of the north playground is an overlook that jets out into the water slightly, creating a small protective wall for the banks south of it. This overlook continues the view for those walking along Exchange Street and can act as a plaza space for small events or the farmers’ market.

The two green spaces, Dragon Tail Greens, are bermed near the street three feet higher than their current elevation. Without blocking views from the street, the berms create more of an amphitheater type hill to watch performances on the water and allow plant material next to the water to be slightly taller and thicker to help reduce stormwater runoff. The ecological needs were met by protecting the water side with terraced planted gabions and by keeping one berm planted in wildflowers that can be mowed for events. These two design elements reduce stormwater runoff and help reduce erosion. A boardwalk path lies between the gabions and the bermed greens, allowing users to walk along the waterfront. Between these green spaces is Paddler’s Cove, an area that brings the river into the park and acts as a boat launch and safe paddling zone. Paddler’s Cove allows boaters to gain balance, or even experience a small lesson in a protected setting. The boardwalk extends following the shape of the cove and acts as an additional overlook for people to watch the activity on the water. Docks connect to the south side of the cove, encouraging canoes, kayaks and larger watercrafts to temporarily moor at the park.

The Front Street Walkway ties into the Quinnipiac River Park after the south playground and adjacent to the dog run. This tree-lined walk seems to terminate at an overlook plaza, but a path under the bridge links the walkway into the River Street Walk.



ZONE 3 MAJOR CONCEPTS

REDISCOVERING THE CONNECTION TO THE QUINNIPIAC



DETAILS

QUINNIPIAC RIVER PARK DETAILS: Dragon Tail Greens

The berms of the Dragon Tail Greens, named after Fair Haven's historical title of "Dragon," create a gentle slope for viewing performances on the water, but do not block the views from the street. The fill also creates a cap of non-contaminated soil, further protecting users from the industrial past of the site. Figure 2 demonstrates how views are maintained.

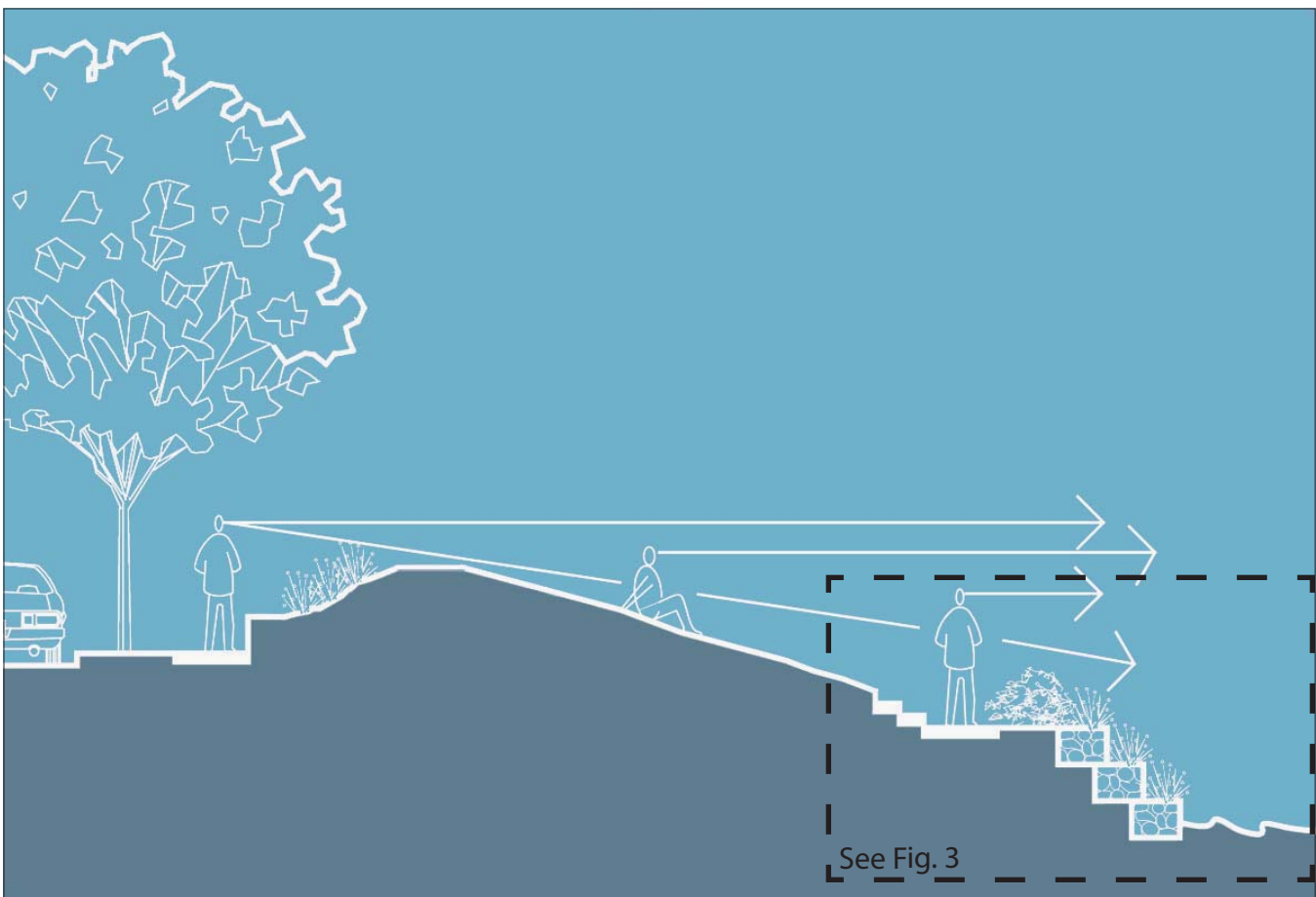
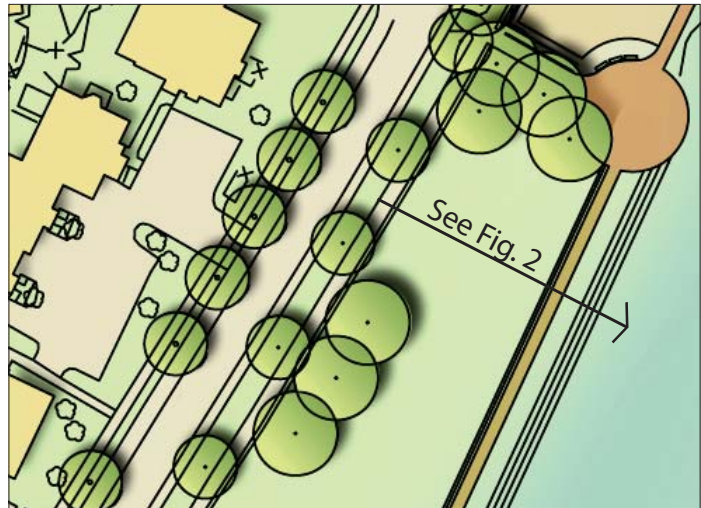


Fig. 2: Dragon Tail Green Views



DRAGON TAIL GREENS

REDISCOVERING THE CONNECTION TO THE QUINNIPIAC

QUINNIPIAC RIVER PARK DETAILS: The Riparian Buffer

The riparian buffer and gabion sea wall in the redesign of Quinnipiac River Park create a natural stormwater management system. The buffer and vegetated gabions will reduce and slow down runoff, resulting in minimized erosion. These naturalized plantings also form new habitat along the river's edge and begin to purify runoff. A plant list was divided into a list for each zone typical of a salt marsh: lower high marsh, middle high marsh, upper high marsh and marsh border. The zones depend on how often the river covers the land in a particular section.

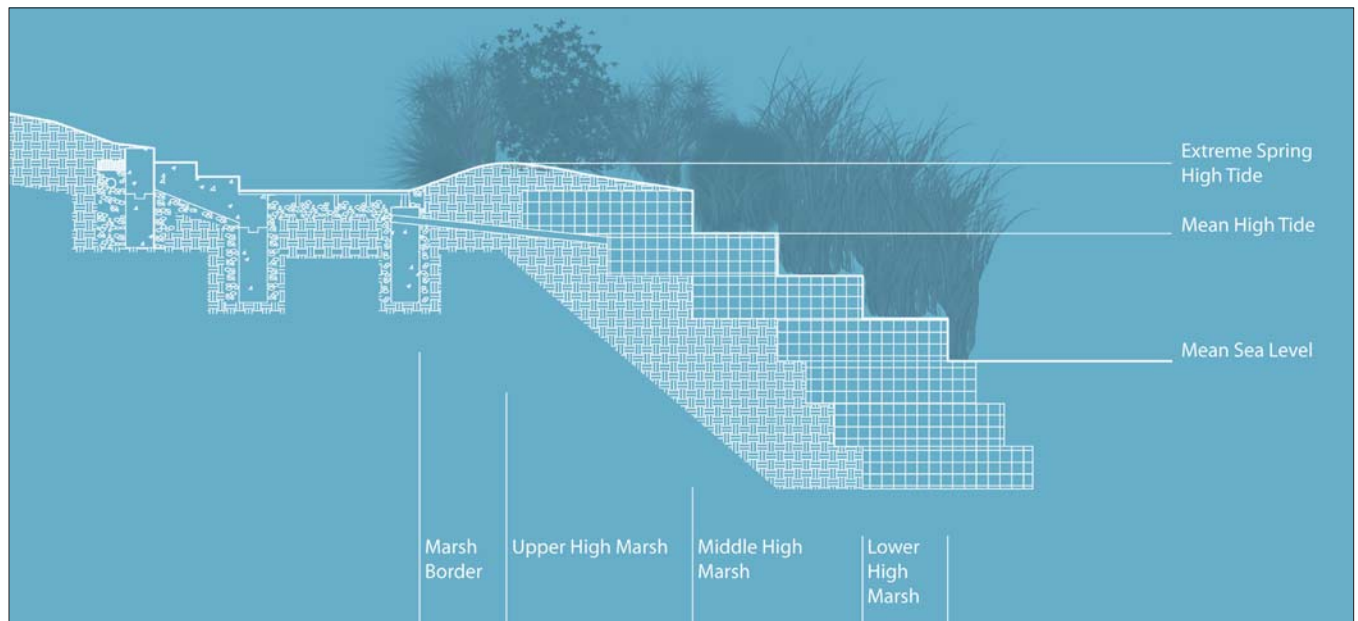


Fig. 3: Steps, Boardwalk, Riparian Buffer and Gabion Detail

RIPARIAN BUFFER/GABION PLANT LIST

Lower High Marsh



Spartina alterniflora
Smooth Cordgrass

Middle High Marsh



Spartina patens
Saltmeadow Cordgrass/Hay



Distichlis spicata
Saltgrass/Spike Grass



Limonium carolinianum
Sea Lavender



Aster novi-belgii
New York Aster



Salicornia europaea
Slender Grasswort

Upper High Marsh



Panicum virgatum
Switchgrass



Aster novae-angliae
New England Aster



Aster tenuifolius
Saltmarsh Aster



Juncus gerardii
Black Rush



Solidago sempervirens
Seaside Goldenrod

Marsh Border



Solidago gigantea
Giant Goldenrod



Solidago rugosa
Rough-stemmed Goldenrod



Schizachyrium scoparium
Little Bluestem



Lupinus perennis
Wild Blue Lupine



Myrica pensylvanica
Northern Bayberry

BUFFER PLANTS



QUINNIPIAC RIVER PARK DETAILS: Front Street Streetscape and Block Playground

Zone 3 has a long stretch of wide road. This can make the road unsafe at times as people travel at fast speeds coming off the Chapel Street curve and continuing towards the Grand Avenue bridge. To help calm traffic, the design proposed to narrow the driving lanes to 10 feet wide, add a 5 foot bicycle lane to the riverside of the road and turn the grass strip along Quinnipiac River Park into a twelve foot wide bioswale. The new streetscape would help the city move towards creating “complete streets” where all types of travelers are accommodated (see figure 4). Adding a bioswale for road runoff would help capture and purify runoff, preventing it from directly entering the river.



Figure 5 shows the plan for Block Playground, named after the Dutch explorer credited with “discovering” Fair Haven. Slightly sunken, the playground shaped like a ship, offers children an opportunity to pretend they are on the river or at sea like the ships they see pass everyday. The playground is ADA-accessible, allowing play for children of all levels of ability. To the north of the main playground is a tot lot, for younger children to have the same play experience at a scale closer to their own. The sunken nature of the two playgrounds helps make the play elements lower so that views are not blocked by those walking on the streetside sidewalk. A large plaza and overlook to the south of the playground offers event or viewing space. **See the CD insert to experience the playground and overlook.**

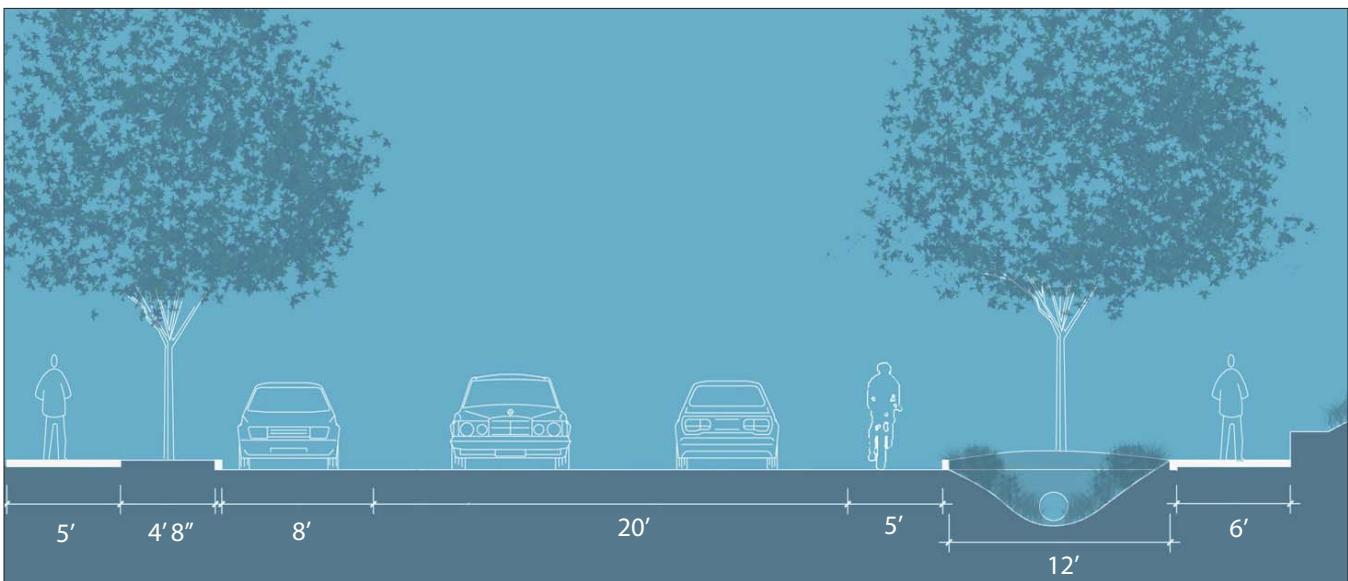


Fig. 4: Front Street streetscape dimensions



FRONT STREET STREETScape

REDISCOVERING THE CONNECTION TO THE QUINNIPIAC

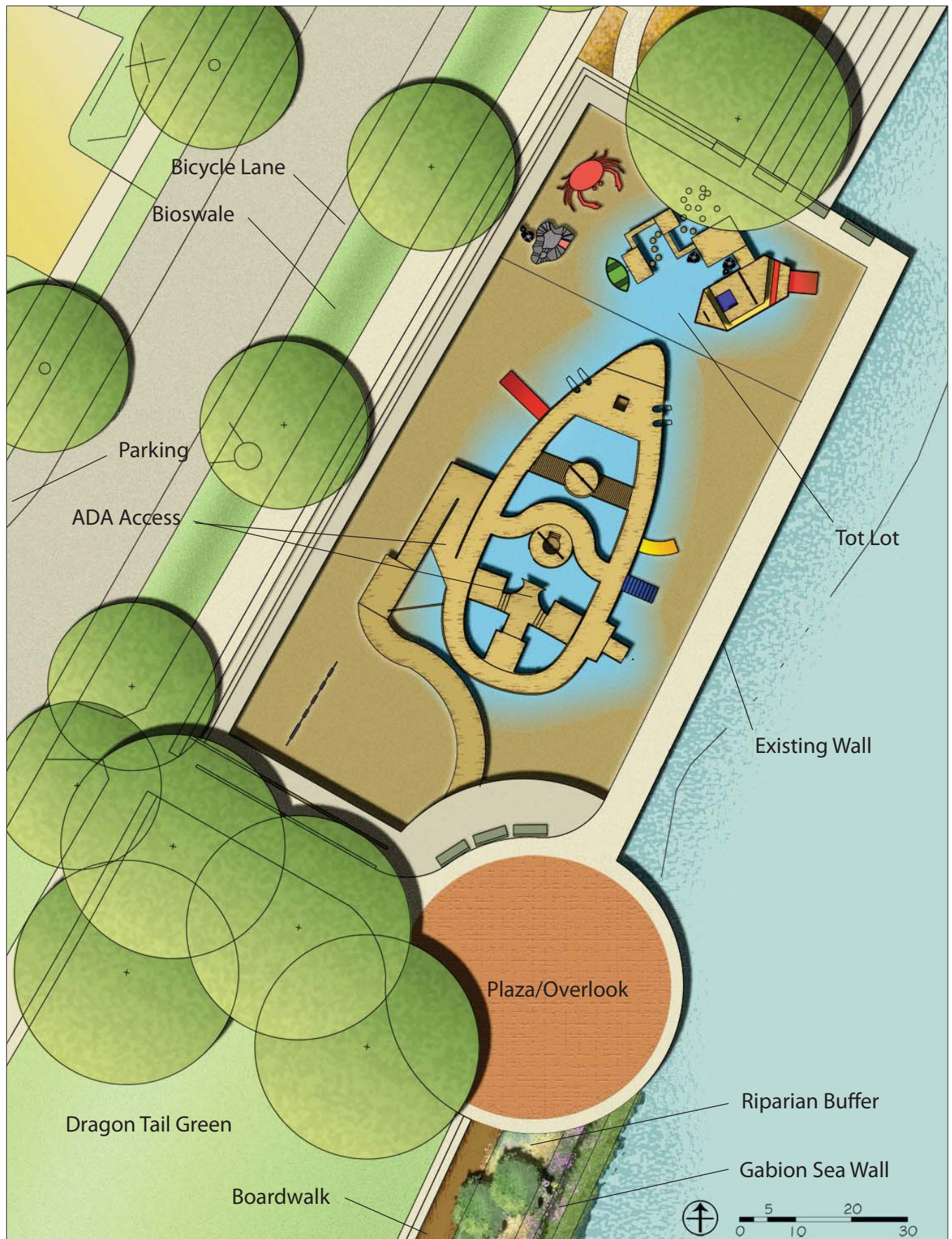


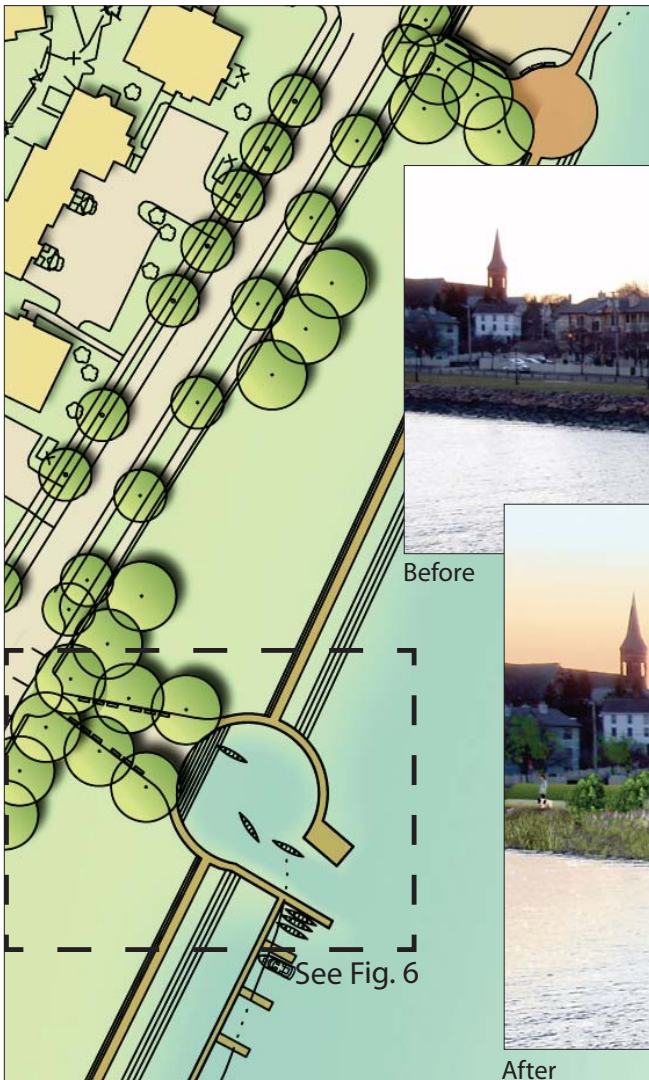
Fig. 5: Block Playground Site Plan

BLOCK PLAYGROUND

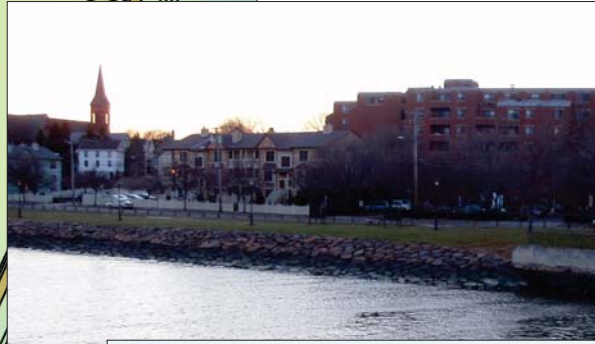
REDISCOVERING THE CONNECTION TO THE QUINNIPIAC



QUINNIPIAC RIVER PARK DETAILS: A New Bank Edge and Paddler's Cove



The transition from the playground to the boat launch includes a newly protected bank. Vegetated gabions give the bank a green facade with native salt marsh plants. The gabions themselves act as a protective sea wall that absorbs wave energy, creates underwater habitat and prevents erosion.



The overlook serves multiple purposes. Besides allowing visitors to be even closer to the water, the overlook further protects the downstream bank, deflecting some of the wave energy. At about 60 feet wide, the overlook is large enough to accommodate several booths for a farmers' market or small event.

Figure 6, on the next page, looks closer at Paddler's Cove, a boat launch and paddling area. North of Paddler's Cove is one of the Dragon Tail Greens. This green is turf year-long, creating a space for active or passive play. The Dragon Tail Green south of Paddler's Cove is left as a meadow to further help reduce stormwater runoff, create greater habitat within the park and lower maintenance needs. Parts or all of the green could be mowed for events or during other periods of time when the park is being heavily used. Otherwise, maintenance would only require it to be mowed twice a year.



A NEW BANK EDGE

REDISCOVERING THE CONNECTION TO THE QUINNIPIAC

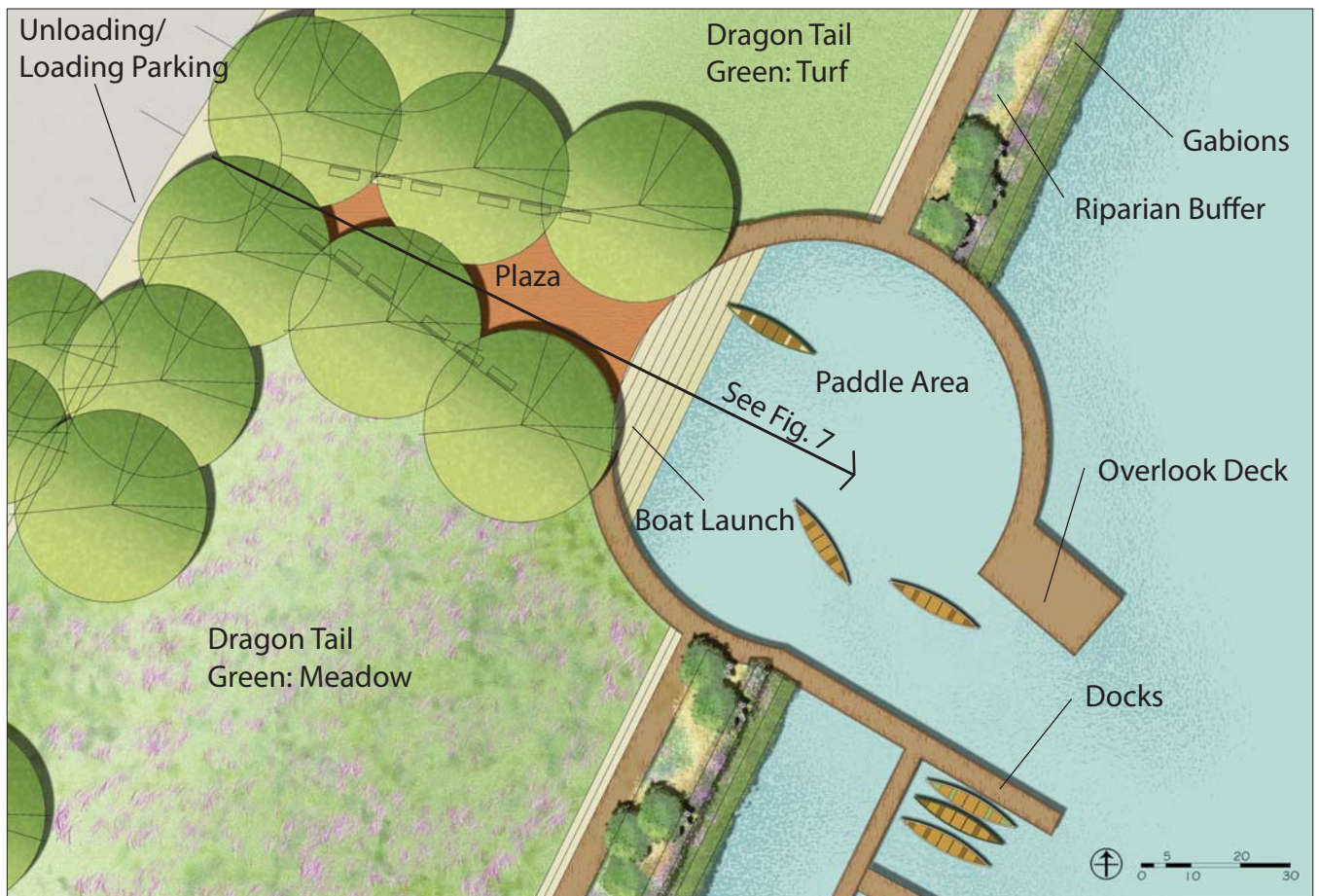


Fig. 6: Paddler's Cove Site Plan



Fig. 7: Paddler's Cove Views

crafts. Figure 7 (above) shows that the elements of Paddler's Cove do not block the streetside visitor. The view may also pull those walking along the sidewalk into the park to explore the space. **See the CD insert to experience Paddler's Cove and entry plaza.**

Paddler's Cove acts as both a boat launch area and a safe place for paddlers to gain balance and practice their skills before heading on the water. This space could also be used for small group lessons for kayaking or canoeing. The large plaza leading up to the launch acts as a social and viewing area, as well as a drive if it is necessary to drop off several watercrafts. Four short-term parking spaces are available adjacent to the plaza for those loading/unloading their

PADDLER'S COVE



CONCLUSION

From the attendance and strong opinions of the Front Street neighborhood community at the charette in January, it was clear that New Haven was ready for some attention to be given to its waterfront. Addressing the river's bank will jump start interest in the rest of the project, as the community begins to see that the city is concerned with the neighborhood's well-being. If New Haven were to move forward with Rediscovering the Connection to the Quinnipiac, it is likely that the value of the neighborhood and that of the one on the east bank of the Quinnipiac that looks at the parks would have increased value and improved safety as more eyes look upon the spaces and as people go out and enjoy the spaces. The bane of many urban communities is having dilapidated outdoor spaces which invite vandalism and drug deals, making neighbors uneasy. By meeting with the community members, the designer insured that they would take interest and pride in the design because it represents their ideas.

Though the 1.5 mile site became daunting at points, it offered many opportunities to explore how to create a unified design on a large scale. In creating the book, it became clear there were several other details that would have supported the overall design more completely. Despite the lack of these extra details, hopefully the community can still see their ideas brought out in the design and also enjoy some details that they may not have initially envisioned. Overall, the scope of the project offered challenges appropriate to a comprehensive project, while also lending a real-world experience. Being held accountable by city officials and community members gave the project an extra challenge as there were many opinions and requirements to balance.



CONCLUSION

REDISCOVERING THE CONNECTION TO THE QUINNIPIAC



APPENDICES

DEFINITION OF TERMS

Best management practices: Practice, or combination of practices that are considered the most technological and/or the most sustainable methods to manage or prevent negative impacts

Estuary: The area where a river meets the sea and fresh and salt water mix.

Greenspace: Refers to land dedicated as open space, whether public or as land conservation; typically includes parks, trails, habitat restoration, playgrounds, etc.

Living shorelines: A method of bank stabilization that utilizes living plant material as a green engineering solution that helps naturally prevent erosion while also creating livable habitat in many situations.

Riparian buffer: A vegetated area along bodies of water that helps purify stormwater and improves infiltration, and provides soil stabilization in order to protect the quality of the waterway it borders.

Seawall: Some sort of solid barricade between the bank or shore and the water to help prevent erosion due to wave action and flooding.

Sheet piling: Structural steel in a sheet form used to create a bulkhead along a shoreline.






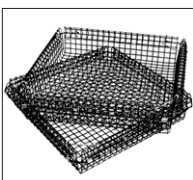

Sustainable: Land management practices that supply long lasting solutions while improving the health of the ecosystem and providing services which are economically feasible and that benefit the environment and people.

Urban wilderness: An effort to create biodiversity into an area that currently lacks such diversity due to the typical urban environment; created as a way for the urban population to reconnect with nature in a less trite way than a typical urban park offers.



SITE MATERIALS AND FURNITURE SUGGESTIONS

The redesign of the area along the west bank of the Quinnipiac offers an opportunity to implement green design elements, including site furniture with high recycled content, porous paving, and details that incorporate local materials from New Haven.

Detail/Material	Description	Use
	Lakeside® bench by Landscapeforms® White Polysite (HDPE - 90% Recycled Content) Most graffiti washes off with all-purpose cleaner www.landscapeforms.com	Benches within parks
	Lakeside® litter receptacle by Landscapeforms® Grass design (different design can be customized) 83% Recycled Content (Steel) www.landscapeforms.com	All trash receptacles in parks and along Front Street
	In-set lighting for steps and along ramps (image example: www.c-illuminations.com)	Steps, ramps
	Porous Paving Allows drainage of about the 1st inch of rainfall Decreases runoff www.perviouspavement.org	Walkways
	Trex® Contours (Color: Saddle) 100% Recycled Content (reclaimed wood/recycled and reclaimed plastic) www.trex.com	Q River Park Boardwalk
	Oyster aquaculture cages Face showing can be filled with oyster shells, rest can be filled with stone	Wall inset - detail facade - create identity
	Oyster Shells/Clam shells	"Mulch" (on top of weed barrier), aggregate for concrete, selected walkways





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